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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/734,262	12/11/2000	Mitsuharu Ohki	112857-224	4709

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BELL, BOYD & LLOYD, LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135

EXAMINER

LAROSE, COLIN M

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No. 09/734,262	Applicant(s) OHKI ET AL.	
	Examiner Colin M. LaRose	Art Unit 2627	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Colin M. LaRose. (3) _____
 (2) MacLane C. Key (48,250). (4) _____

Date of Interview: 15 March 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
 If Yes, brief description: _____

Claim(s) discussed: 6.

Identification of prior art discussed: Furusawa (5,050,227).

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant and Examiner discussed a proposed amendment (see attached). Examiner advised the Applicant that the proposed amendment seems to distinguish from the Furusawa reference. Examiner also discussed the meaning of "distance" between two pixels, as recited in the claim -- which can possibly mean either spatial distance or distance in value. Examiner also discussed the meaning of values "associated" with two pixels, as recited in the claim -- which denotes any values "associated" with the two pixels and is not necessarily limited to the values of the two pixels themselves.

MAR. 9. 2006 9:31AM

BELL BOYD & LLOYD

NO. 7842 P. 1

BELL, BOYD & LLOYD PLLC

1615 L Street, N.W.
Suite 1200
Washington, DC 20036

202-466-6300
202-463-0678 FAX

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FAX COVER SHEET

Date

March 9, 2006

Total Number of Pages

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To

Colin M. Larose

Company

U.S. Patent and Trademark
Office

City

Fax Number

571-273-7423

Phone Number

From

MacLane C. Key

Phone

202-955-6855

Direct Fax

202-835-4142

Client/Matter Number

0112857-00224

Message

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Thank you.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Ohki et al.
Appl. No.: 09/734,262
Conf. No.: 4709
Filed: December 11, 2000
Title: BOUNDARY LINE DETECTION APPARATUS AND METHOD, AND
IMAGE PROCESSING APPARATUS AND METHOD AS WELL AS
RECORDING MEDIUM
Art Unit: 2623
Examiner: Larose, Colin M.
Docket No.: 0112857-224

Faxed to 571-273-7423

DRAFT RESPONSE FOR INTERVIEW PURPOSES ONLY

Sir:

In response to the Office Action dated February 8, 2006, please consider for the purposes of our pending after-final interview these proposed amendments and remarks for the above-identified patent application as follows:

Proposed Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 5 of this paper.

*For discussion only
do not enter*

Appl. No. 09/734,262

Draft copy of Proposed Amendments and Remarks for Interview Purposes Only

Proposed Amendments to the Claims for Interview Purposes Only:

This listing of proposed claims would replace all prior versions, and listings, of claims in the application:

Listing of Claims Proposed for Interview Purposes Only:

Claims 1-5 (canceled)

Claim 6 (currently amended): An image processing apparatus, comprising:

storage control means for controlling storage of a plurality of pixels inputted thereto;

detection means for detecting a boundary line ~~in the proximity of said pixels~~ between a first pixel of said plurality of pixels and a second pixel of said plurality of pixels by comparing differences between pixel values associated with ~~at least two of said pixels~~ said first pixel and said second pixel;

position calculation means for calculating a position ~~positions~~ of the boundary line with respect to said first pixel ~~pixels~~;

weighting means for weighting ~~the pixel values of said pixels~~ said first pixel based on the distance between said first pixel and said second pixel ~~pixels~~ and the ~~positions~~ position of the boundary line calculated by said position calculation means; and

outputting means for outputting said first pixel ~~pixels~~, wherein the weighted pixel ~~values~~ are value is associated with said outputted first pixel ~~pixels~~.

Claim 7 (currently amended): An image processing method, comprising:

controlling storage of a plurality of pixels inputted in a storage device;

detecting a boundary line ~~in the proximity of said pixels~~ between a first pixel of said plurality of pixels and a second pixel of said plurality of pixels by comparing differences between pixel values associated with ~~at least two of said pixels~~ said first pixel and said second pixel;

calculating a position ~~positions~~ of the boundary line with respect to said first pixel ~~pixels~~;

weighting the pixel ~~value~~ values associated with said first pixel ~~pixels~~ based on the distance between said first pixel and said second pixel ~~pixels~~ and the ~~positions~~ position of the

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Draft copy of Proposed Amendments and Remarks for Interview Purposes Only

boundary line wherein weighting the pixel value values includes blending at least two of the pixel values of said plurality of pixels; and

an outputting step of outputting said first pixel pixels, wherein the weighted pixel values are value is associated with said outputted first pixel pixels.

Claim 8 (currently amended): A recording medium on which a computer-readable program is recorded, the computer-readable program comprising:

a storage control step of controlling storage of a plurality of pixels inputted in a storage device;

a detection step of detecting a boundary line ~~in the proximity of said pixels~~ between a first pixel of said plurality of pixels and a second pixel of said plurality of pixels whose storage has been controlled by the processing of the storage control step by comparing differences between pixel values associated with ~~at least two of said pixels~~ said first pixel and said second pixel;

a position calculation step of calculating a position ~~positions~~ of the boundary line with respect to said first pixel pixels whose storage has been controlled by the processing of the storage control step;

a weighting step of weighting the pixel value values of said first pixel pixels based on the distance between said first pixel and said second pixel pixels and the ~~positions~~ position of the boundary line calculated by the position calculation step, wherein said weighting step includes blending at least two of the pixel values associated with said plurality of pixels; and

an outputting step of outputting said first pixel pixels, wherein the weighted pixel values are value is associated with said outputted first pixel pixels.

Claim 9 (currently amended): The image processing apparatus of claim 6, wherein the weighting means controls weighting of the pixel value values of said first pixel pixels when there is no boundary line ~~on~~ between said first pixel and a right-side or left-side adjacent pixel left-hand or right-hand sides of a noticed pixel or there is no boundary line ~~on~~ between said first pixel and an upper or lower adjacent pixel upper or lower sides of the noticed pixel.

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Claim 10 (currently amended): The image processing method of claim 7, wherein the weighting step controls weighting of the pixel ~~value~~ values of said first pixel ~~pixels~~ when there is no boundary line ~~on~~ between said first pixel and a right-side or left-side adjacent pixel ~~left-hand or right-hand sides of a noticed pixel~~ or there is no boundary line ~~on~~ between said first pixel and an upper or lower adjacent pixel ~~upper or lower sides of the noticed pixel~~.

Claim 11 (currently amended): The recording medium of claim 8, wherein the weighting step controls weighting of the pixel ~~value~~ values of said first pixel ~~pixels~~ when there is no boundary line ~~on~~ between said first pixel and a right-side or left-side adjacent pixel ~~left-hand or right-hand sides of a noticed pixel~~ or there is no boundary line ~~on~~ between said first pixel and an upper or lower adjacent pixel ~~upper or lower sides of the noticed pixel~~.

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REMARKS

This draft response for interview purposes only is submitted in reply to the Final Office Action dated February 8, 2008. Applicants thank Examiner Larose for agreeing to review this draft and grant a telephonic interview to discuss the proposed amendments. Claims 6-11 are pending in the patent application. Claims 6-11 have proposed amendments. No new matter would be introduced by these amendments.

Claims 6-11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Furusawa et al., U.S. Patent No. 5,050,227 ("Furusawa"). At least for the reasons set forth below, Applicant believes that the rejections raised in the Office Action would be overcome by the proposed amendments.

Claim 6 relates to an image processing apparatus that includes detection means for detecting a boundary line between a first pixel of a plurality of pixels and a second pixel of the plurality of pixels by comparing differences between pixel values associated with the first pixel and the second pixel. The image processing apparatus also includes weighting means for weighting the first pixel based on the distance between the first pixel and the second pixel and the position of the boundary line calculated by a position calculation means.

Furusawa relates to a method for smoothing in a tangential direction of a contour and detail enhancement in its perpendicular direction simultaneously with spatial filters having a weighing factor distribution. The Advisory Action relies upon the borders of areas such as R1 and R2 shown in Figs. 3A and 3B to teach a boundary line. Furusawa discloses that the weighting factors can be influenced by the distance between a central pixel of a mask and the outline of a designated area (i.e., the border of areas such as R1 and R2). Col. 6, Lines 47-55. However, the Furusawa does not disclose that the boundary line is between a first and second pixel and that the boundary line is detected by comparing differences between pixel values for the first and second pixels. Instead, Furusawa teaches that the outline of the designated area is determined by a user specifying one or more continuous line segments. The outline of the designated area is then determined to be a distance, *d*, from the user-specified line segment. Col. 4, Lines 14-38. For at least these reasons, it is respectfully submitted that Furusawa does not disclose or suggest weighting a first pixel based in part upon the position of a boundary line wherein the boundary line is between the first pixel and a second pixel and the boundary line is

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Draft copy of Proposed Amendments and Remarks for Interview Purposes Only


detected by comparing differences between pixel values associated with the first pixel and the second pixel. Thus, it is respectfully submitted that Furusawa does not disclose or suggest weighting means for weighting said first pixel based on the distance between said first pixel and said second pixel and the position of the boundary line as in Claim 1.

For at least these reasons, it is respectfully submitted that Claim 6 and Claim 9, which depends from Claim 6, would each be patentably distinguished over Furusawa and would be in condition for allowance. For similar reasons, it is respectfully submitted that Claim 7 and Claim 10, which depends from Claim 7, and Claim 8 and Claim 11, which depends from Claim 8, would each be patentably distinguished over Furusawa and would be in condition for allowance.

In light of the above, Applicants respectfully submit that Claims 6-11 would be patentable over the art of record. Applicants' representative can be reached to discuss these proposed amendments at 202-955-6855.

Respectfully submitted,

BY

MacLane C. Key (48,250)
Cust. No. 29175

Dated:

3-8-06